

Wildlife Fund-Pakistan. I am greatly indebted to Malik Muzaffar Khan, the Nawab of Kala-

bagh, for permission to observe wildlife in his reserve.

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5. THE DUGONG *DUGONG DUGON* (SIRENIA) AT BAHRAIN, PERSIAN (ARABIAN) GULF

The Dugong *Dugong dugon* is listed by the International Union for Conservation of Nature and Natural Resources (IUCN) as an endangered species. With the formation of the Sirenia Specialist Group of the Survival Service Commission of the IUCN (Bertram 1974) further emphasis has been given to the general concern felt for the future of the dugongs and manatees, and to the need for more information on which to base protective measures. GCL & CKR Bertram (1973) review the present state of knowledge of this group of aquatic herbivores and they mention my collection of skulls of *D. dugon* from the Persian (Arabian) Gulf. This note is to place on record some details of this collection, which is now deposited in the British Museum (Natural History), London.

The 30 small islands of Bahrain lie in the Gulf of Bahrain at the entrance to the Gulf of Salwa, midway along the southern coast of the Gulf at 26°02'N. 50°32'E. They form part of

a narrow, uplifted structural feature, known as the Bahrain Ridge, over which the water depth is less than 9 metres. Apart from rocky reefs, the sea bed around Bahrain and in the Gulf of Salwa consists of sands or muddy sands (Purser 1973). Short sea grasses, available to the Dugong as food (listed by Newton 1965), are quite abundant, though patchy; they are more common on the sheltered east side of Bahrain, particularly near the flume, or outlet of cooling water, of the BAPCO oil refinery at Sitra.

My observations are of animals cast up dead on the shores of Bahrain Island in 1969, 1970 and 1971, and of remains found there and on Howar Island, 13 miles to the south-east. The cause of death was never apparent, but may include drowning in fish traps and nets, ingestion of oil, concussion from sub-marine seismic surveys (such as those carried out in 1971) and natural causes, particularly during the coldest months of January and February.

The animal is known to some Bahrainis as *Baqarat al Bahr* (sea cow), and to some others as *Baqara seit*, but for the only reports of live animals I am indebted to the late Mrs Anne Khalifa and to Mr. J. H. Clingly, who have observed single specimens as recently as 1974 off the east coast of Bahrain Island, swimming and surfacing "like a slow dolphin"; and to Mr R. Pickersgill, who once saw one raise its head and shoulders above the surface. From this evidence and the list of specimens which follows, one may conclude that a small population continues to survive in the Gulf of Bahrain. I am grateful to Dr G C L Bertram for criticising a draft of this note.

C/o LLOYDS BANK LTD.,
6 PALL MALL, LONDON SW1Y 5 NH,
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SKULLS OF *D. dugon* FOUND AT BAHRAIN

- 14 Apr 1969 ♂ E. coast, near Askar.
27 Apr 1969 ♂ Ras al Bahr.
1969 o? Ras al Bahr.
29 Apr 1970 ♀ E. coast, near Durr.
29 Apr 1970 ♂ E. coast, near Durr.
22 Feb 1970 o? Ras al Bahr.
10 Feb 1971 ♀ E. coast, near Ras al Qarain
A skull from the remains of an animal dead about 3 months.
An old skull.
An old skull.
Skull from a carcass, length c. 7 ft, reported dead 22 February 1970.
With the ♀ above; length 9-10 ft.
An old skull.
Whole head [in deep freeze in the BM (NH)] from a freshly dead, fully fed animal, length 83 inches.

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6. THE OCCURRENCE OF RUSSIAN-RINGED LARGE CORMORANTS [*PHALACROCORAX CARBO SINENSIS* (SHAW)] IN INDIA

In the afternoon of 15th January 1975, I was out rowing at the Boat Club at Calcutta. Hundreds of Little Cormorants [*Phalacrocorax niger* (Viellot)] were settled on the trees on the island in the centre and as we approached it, four Large Cormorants [*P. carbo sinensis* (Shaw)] were seen perched high up. An examination through glasses, revealed that one of them carried a ring on its leg, the

ends of which were not folded over each other as is usual, but projected behind like a spur, as illustrated on the cover of current numbers of *The Ring*.

Inquiry at the Bombay Natural History Society failed to reveal any evidence of such rings having been used in India, but there was one record of a Large Cormorant ringed near Alma-Ata 43° 15'N., 76° 57'E. Khazakhstan, U.S.-